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Prevention and control of enteric swine diseases

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Abstract

Work on colibacillosis has been concentrated on isolating and identifying enterotoxigenic E. coli from specimens submitted to the Veterinary Diagnostic Laboratory. Strains of enterotoxigenic E. coli isolated in the laboratory were sent to veterinary practitioners to use in producing of autogenous vaccines for producers to prevent neonatal diarrhea. Of 1,179 E. coli isolated from clinical specimens and tested for enterotoxin production, more than 22 percent of these isolates were disease-producing enterotoxigenic strains. These enterotoxigenic E. coli were sent to 136 veterinary practitioners for use in autogenous vaccines. The diagnostic laboratory also serves as a center for storing these vaccine strains.; Swine Day, Manhattan, KS, November 8, 1979

Keywords

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Prevention and Control of Enteric Swine Diseases

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Work on colibacillosis has been concentrated on isolating and identifying enterotoxigenic E. coli from specimens submitted to the Veterinary Diagnostic Laboratory. Strains of enterotoxigenic E. coli isolated in the laboratory were sent to veterinary practitioners to use in producing of autogenous vaccines for producers to prevent neonatal diarrhea. Of 1,179 E. coli isolated from clinical specimens and tested for enterotoxin production, more than 22 percent of these isolates were disease-producing enterotoxigenic strains. These enterotoxigenic E. coli were sent to 136 veterinary practitioners for use in autogenous vaccines. The diagnostic laboratory also serves as a center for storing these vaccine strains.

In a study to determine if the colony type of E. coli isolates grown on different laboratory media was significant in identifying pathogenic E. coli, isolates grown on tergitol-7 agar produced colonies with certain shapes that were much more likely than others to contain disease-producing bacteria.

We used ultrafiltration to purify and concentrate the toxin that damages pigs' intestines and injected it into laboratory animals to produce antiserums to the toxin. The antisera can be used to improve detection of pathogenic E. coli.

We have also isolated and separated white blood cells from the gut wall because they may be important in protecting the pig from disease-producing E. coli. We have determined their response to artificial stimulators, in preparing to study the cells' ability to respond to the toxins produced by E. coli.